southern Rajasthan provide extensive catchment to many rivers like the Som, Mansi-vakal, Banas, Ahar, Bedach, Khari, Mahi, and Sabarmati. A large number of dams and lakes and other water bodies are confined to southern Rajasthan. Among them, Mahi dam, Pichhola, Fatehsagar, Rajsamand, Jaisamand, Gabsagar, etc., are some important large water bodies. Many famous wildlife sanctuaries like Sitamata, Fulwari Ki Nal, Kumbhalgarh, Mt.Abu, Jaisamand are confined to southern districts. All these provide suitable habitat to land snails. However, nothing is known about fresh water snails of southern Rajasthan.

A list of the fresh water snails of southern Rajasthan is given below:

Order: Mesogastropoda

Family: Viviparidae

1. *Bellamya bengalensis* f. *typica* (Lamarck): Shell ovate. Commonly occuring in dams and larger lakes. A large number of dead snails can be seen at the water line of the big lakes.

Family: Bithyniidae

2. *Gabbia orcula* var. *producta* (Nevill): Common in stagnant water of lakes. Shell ovate and looks like a miniature *Bellamya.*

Family: Thiaridae

3. *Thiara* (*Melanoides*) *tuberculata* (Muller): Shell elongated. Collected from stagnant water, attached to the substratum. Uncommon.

Family: Lymnaedae

4. *Lymnaea (Pseudosuccinea) acuminata* f. *typica* (Lamarck): Shell ovately oblong, slightly thick and smooth in appearance. Commonly appears in flowing water of hill streams after rains. It was also collected from wells bordering the hill streams. It can be seen either floating or attached to some substratum.

Family: Planorbidae

5. *Indoplanorbis exustus* (Deshayes): Shell discoidal. Common in lakes.

6. *Gyraulus convexiusculus* (Hurton): Shell discoidal and looks like a flattened disc. Common in stagnant water of lakes.

Order: Stylommatophora

Family: Ariophantidae

7. *Macrochlamys indica* (Godwin-Austen): Shell discoidal, with convex upper surface. During the monsoon it is seen crawling in damp and moist places in gardens, forest floor etc. Common.

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33. *CORYDALIS PSEUDO-JUNCEA* LUDLOW (FUMARIACEAE): A NEW RECORD FOR INDIA

(*With one text-figure*)

During recent plant exploration in the alpine zones of Garhwal Himalaya, I collected a few interesting specimens of *Corydalis* DC. from Kauri Pass alpine zone (Garhwal Himalaya). These specimens, after thorough checking of literature, were identified as *Corydalis pseudo-juncea* Ludlow. They were sent to Magnus Liden, Goteborg who has revised *Corydalis* in Nepal.

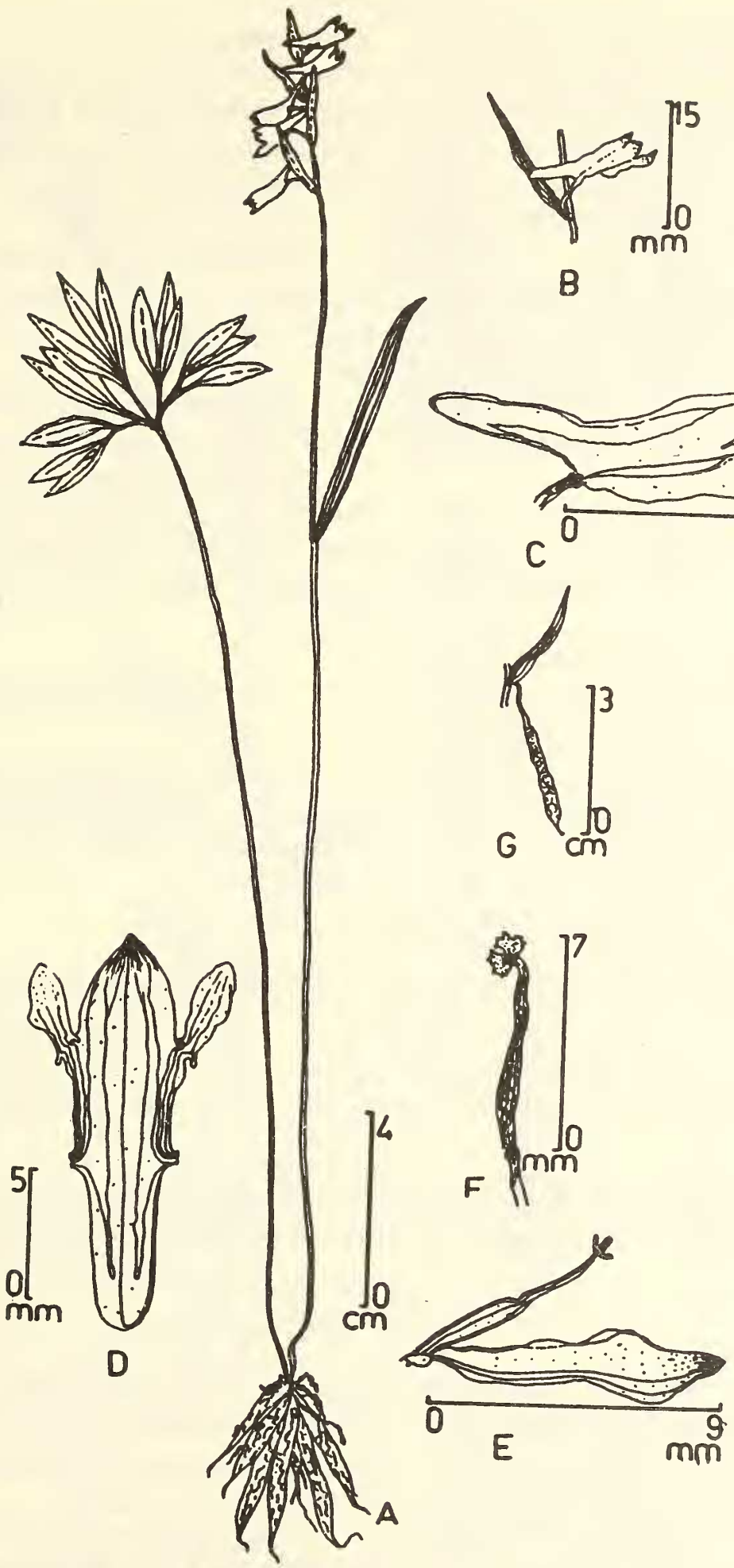

Fig. 1. *Corydalis pseudo-juncea* A. Flowering plant; B. Flower with bract; C. Flower; D. Posterior petal spread open; E. Anterior petal; F. Carpel; G. Fruit.

He confirmed the identity of these specimens as *Corydalis pseudo-juncea* Ludlow. Ludlow and Stearn (1975), described this species from Nepal but it has not been recorded from the Indian Himalaya. The recent collection is of phytogeographic interest, and represents a new record from India.

A detailed description, line diagram and habitat of the species are given to facilitate identification. The voucher specimens are maintained at Herbarium, Department of Botany, H.N.B. Garhwal University, Srinagar (Garhwal), India (GUH).

Corydalis pseudo-juncea Ludlow. in *Bull. Br. Mus. nat. Hist. (Bot.) 5(2)*: 62-64. t, 11. 1975; Liden, *Bull. Br. Mus. nat. Hist. (Bot.) 18(6)*: 477. t, 4. 1989.

Slender erect herbs. Storage roots tuberous, fusiform, sessile. Stem slender, erect, glabrous, 10-40 cm long, green. Radical leaves 1-2, with long (upto 20 cm) filiform petioles, biternate with long leaflets; leaflets glabrous, lanceolate, acute, 1.0-2.5 cm long; cauline leaf solitary, sessile, in upper part of stem, linear, acute, 1.0-6.0 x 0.2-0.4 cm. Racemes few (2-6) flowered. Bracts linear, acute, erect, longer than pedicels, 0.8-1.8 cm long. Flowers on 0.4-0.8 cm long pedicels, lemon yellow, 1.0-1.6 cm long, not tipped with dark purple; sepals minute, caducous; posterior petal 15 mm long (including 7 mm spur), dorsal crest very narrow, anterior petal upto 9 mm long. Ovary linear 7.0 x 10 mm; stigma bilobed, papillose. Fruit linear on deflexed pedicel, 20-22 mm long including 2.5 mm style, 8-10 seeded (Fig. 1).

Fl. & Fr.: June-July.

Habitat: Alpine pastures, among tufts of grasses on gentle slopes or small grassy gullies. Usually solitary 3250-3350 m above msl.

Distribution: Alpine zones of West Nepal, South Tibet, Garhwal Himalaya (India).

Specimen Examined: India, Garhwal Himalaya, Kuari Pass area, 3250 m, vi. 1988, D.S. Rawat 19,902 (GUH); Garhwal Himalaya, Kuari Pass area, 3350m, vi. 1995, D.S. Rawat 26,101 (GUH).

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34. *CONYZA JAPONICA* (THUMB.) LESS. (ASTERACEAE): AN ADDITION TO THE FLORA OF ANDHRA PRADESH

(*With one text-figure*)

During the floristic studies on Asteraceae in Andhra Pradesh, *Conyza japonica* (Thumb.) Less. was collected from Anantagiri and Araku valley of Visakhapatnam dist. The identification was confirmed with the help of literature and herbaria (MH & CAL). Gamble (1921) reported it from Mahendragiri hills of erstwhile Madras Presidency which is now a part of Orissa state. As it was not reported so far by earlier workers, it is reported as a new distributional record from Andhra Pradesh. Detailed description, line drawings, phenology and distribution are provided.

Conyza japonica (Thumb.) Less., Syn. Comp. 204. 1832; *FBI* 3: 258. 1881; Gamble, 682. 1821; R.R. Rao *et al. Fl. Ind. Enum.-Ast.* 27. 1988. *Erigeron japonicum* Thumb. *Fl. Jap.* 312. 1784.